

§Appl. No. 09/856,044  
Amdt. dated February 3, 2005  
Reply to Office Action of, November 3, 2004

**Listing of Claims:**

Please amend the claims as follows:

**Listing of Claims:**

**Claim 1** (Cancelled)

**Claim 2** (Currently Amended) A method of claim 13 ~~1~~, wherein the sequence database is a protein sequence database.

**Claim 3** (Currently Amended) A method of claim 13 ~~1~~, wherein the sequence database is a nucleotide sequence database.

**Claim 4** (Currently Amended) A method of claim 13 ~~1~~, wherein the mass spectrometry data is MALDI-TOF data.

**Claim 5** (Currently Amended) A method of claim 13 ~~1~~, wherein the mass spectrometry data is obtained by electrospray on a time-of-flight, quadrupole, or ion trap mass analyzer.

**Claim 6** (Cancelled)

**Claim 7** (Currently Amended) A method of claim 13 ~~1~~, further comprising:  
performing a mass spectral analysis on a sample comprising one or more microorganisms.

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**Claim 8 (Currently Amended)** A method of claim 13 ~~4~~, further comprising:  
identifying molecular weights of proteins in a mass spectrum of said sample.

**Claim 9 (Currently Amended)** A method of claim 13 ~~4~~, wherein said sample comprises  
at least two different species of microorganisms.

**Claim 10 (Currently Amended)** A method of claim 13 ~~4~~, wherein the sequence database is  
~~the~~ comprises NCBI/SwissProt/EMBL database.

**Claim 11 (Currently Amended)** A method of claim 13 ~~4~~, further comprising chemical or  
enzymatic digestion of a protein in said sample.

**Claim 12 (Currently Amended)** A method of claim 13 ~~4~~, wherein said sequence database  
comprises nucleotide or protein sequence information that is converted into molecular weight  
information.

**Claim 13 (Currently Amended)** A method of identifying one or more unknown  
microorganisms in a sample comprising:

searching a database for the molecular weights of a plurality of intact, undigested proteins  
obtained from ~~that are predicted to have the molecular weights of proteins in~~ a mass spectrum of  
a sample, whereby said one or more unknown microorganisms are identified,

wherein said sample comprises a plurality of proteins from one or more unknown  
microorganisms, and said database is searched for more than one different protein, and

wherein said database comprises molecular weight information deduced from nucleotide  
or protein sequence information obtained from genomic sequencing of known microorganisms.

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**Claim 14** (Cancelled)

**Claim ~~16~~ 15** (Currently Amended) A method of claim 13, wherein the database searching consists of searching a database for a plurality of intact, undigested proteins.

**Claim 16** (New) A method of claim 13, further comprising inputting said molecular weights obtained from said mass spectrum.